



Limerick
Pennsylvania



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RPPA 6.0 - 1
REP Post-Plume Awareness Course (RPPA)
Recovery (Late) Phase

Module Objectives

- This module will focus on identifying the recovery strategies, coordination and communication conducted by State and local agencies with Federal resources during the Late Phase of a radiological incident at an NRC-licensed commercial NPP.



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Recovery

- Recovery refers to the process of reducing radiation exposure rates and concentrations of radioactive materials in the environment to acceptable levels allowing for the **return** and unconditional occupancy and use by the general public.
- Recovery involves continued and extensive field sampling, damage/ impact assessments and the coordination of federal assistance and the nuclear insurance benefits.



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The return of households and communities to relocation areas during the cleanup process, at radiation levels acceptable to the community, during the late phase.



- Definition: EPA PAG Manual [2017] pg. 97



Although it may take years to achieve the final cleanup goals for all land uses, reoccupancy of the affected area will be possible when interim cleanup can reduce short-term exposures to acceptable levels during the time it takes to achieve the long-term goals.



Definition: EPA PAG Manual
[2017] § 5.1.4 pg. 72



There may be **institutional** or **engineering** controls placed on some portions of the site to prevent excessive exposures until further active remediation, radioactive decay, or natural weathering allow the site to meet cleanup goals.



Definition: EPA PAG Manual
[2017] § 5.1.4 pg. 72



- An example of an **institutional** control might be a restriction on planting vegetable gardens to avoid ingesting radionuclides that may be taken up by the plant roots from the soil.
- An example of an **engineering** control to limit exposures might be adding a layer of pavement or cement over gamma emitting radionuclides that have become fixed in place by sorbing onto the street and sidewalks.



Definition: EPA PAG Manual
[2017] § 5.1.4 pg. 72



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RPPA 6.0 - 7

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Key Points of the Late Phase (1 of 2)

- Numeric PAGs will **not** be used to guide restoration and recovery of areas impacted by a radiological incident; rather, planning activities should include a process to involve stakeholders in setting priorities and determining actions. Such a process should be flexible to adapt to a variety of situations.
- Reoccupying households and businesses should be considered in balance with progress made in reducing radiation risks through decontamination, radioactive decay, and managing contaminated waste.



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Key Points of the Late Phase (2 of 2)

- Incidents that result in large volumes of waste from a large-scale radiological incident would likely overwhelm existing radioactive waste disposal capacity in the U.S.
- Following a nuclear accident, the states bear primary responsibility to identify and provide waste management options, including disposal capacity.
- Safely managing and disposing of radioactive waste will require advance planning at all levels of government and careful coordination with stakeholders at all stages of the decision-making process.



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Nuc/Rad Incident Annex (NRIA) [2016] (Base Annex pg. 50)

- Funding – Stafford Act
- Federal to Federal Support – Non-Stafford Act



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RPPA 6.0 - 10

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Recovery (Late) Phase

NRIA Branch 2: Federal Response To and Recovery From . . .

- Nuclear Liability Insurance (pg. 8)
- Insurance and Coordination of benefits and Services (pg. 9)
- Coordination of Benefits (pgs. 12-13)
- Nuclear Power Plant Post-Event Liability and Response/Recovery Funding Activities (Decision Tree) (pg. 13)
- Compensation and Funding Mechanism (pgs. 13-14)
- Funding (pgs. 14-15)



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American Nuclear Insurers (ANI)

<https://www.amnucins.com/>

- A pool of major U.S. insurance companies
- Provides nuclear liability insurance to U.S. commercial nuclear risks
- Insures all U.S. nuclear power plants
- Responds to nuclear liability claims from people who live, work, own homes & businesses near insured nuclear facilities

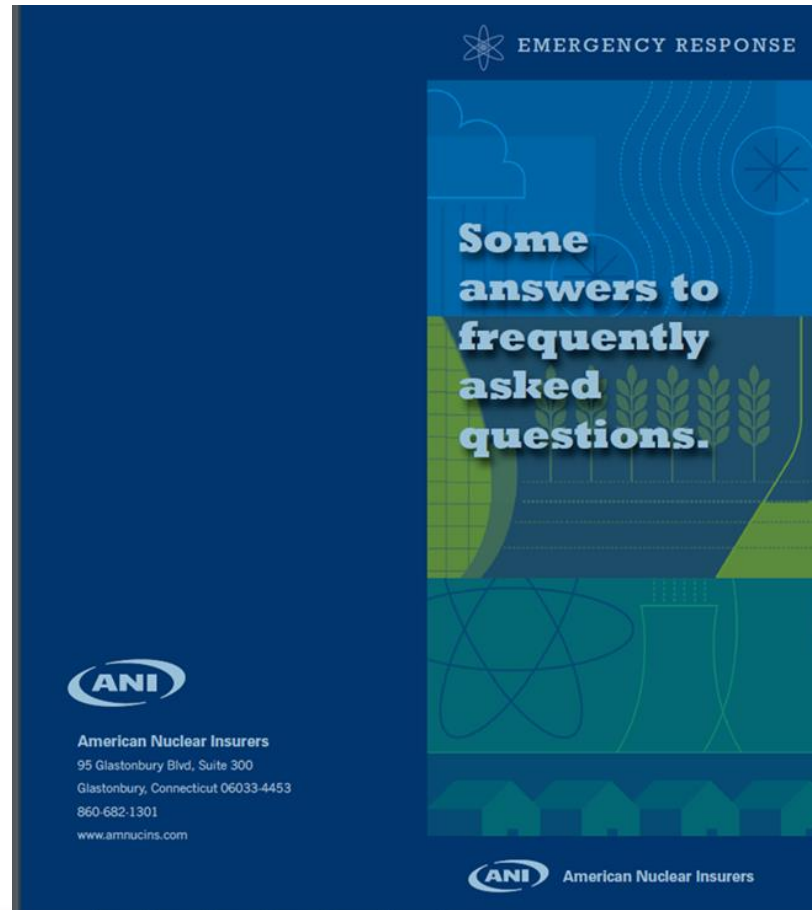


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American Nuclear Insurers (ANI)

https://www.amnucins.com/wp-content/uploads/2018/02/ANI_ER_FAQ_Brochure.pdf



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Reference: ANI FAQ Brochure (Handout)

RPPA 6.0 - 13

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Recovery (Late) Phase

Price Anderson Act (PAA) [September 1957]

(1 of 2)

- The Price Anderson Act (PAA) provides...
 - A framework for how financial protection will be dispersed to the public impacted by a nuclear event
 - Legal requirements for financial protection to the public in the event of a nuclear incident



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See Participant Notes

RPPA 6.0 - 14

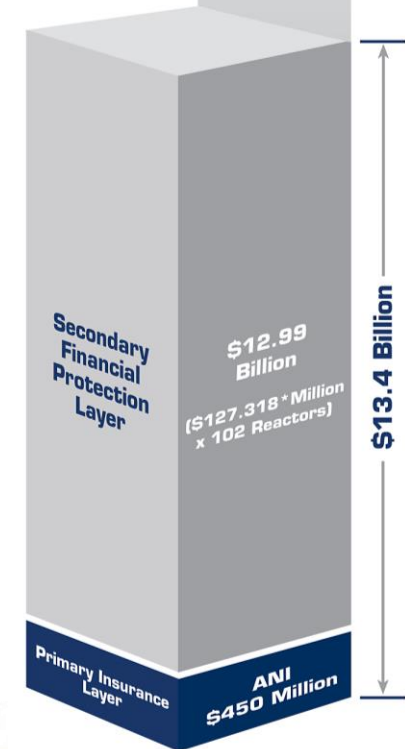
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Recovery (Late) Phase



Price Anderson Act (PAA) (2 of 2)

- The Financial Protection Program:
 - Aggregate Public Liability = \$13.4 Billion
 - Primary Financial Protection Layer = \$450 Million
 - Secondary Financial Protection Layer = \$12.99 Billion
 - Congress is required, under the Price-Anderson Act, to “take whatever action is determined to be necessary... to provide full and prompt compensation” for claims resulting in damages that exceed the aggregate public liability.

*Congress is required, under the Price-Anderson Act, to “take whatever action is determined to be necessary... to provide the full and prompt compensation” for claims resulting in damages that exceed the Secondary Financial Protection layer***

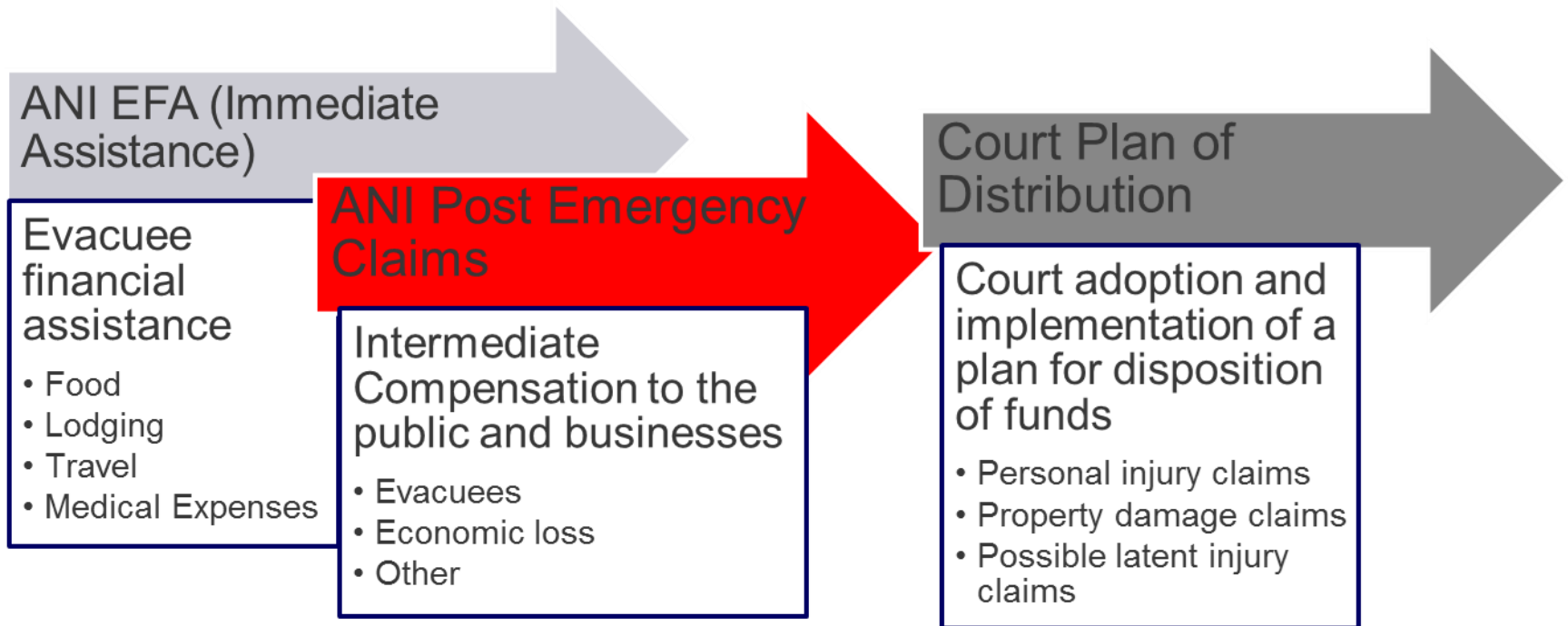


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RPPA 6.0 - 15

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Recovery (Late) Phase

Response under Price Anderson Act (PAA)



Compensation Plan:

- Congress will take whatever action is necessary to ensure full and prompt compensation for all valid claims, including allocation or set asides for latent injury claims



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RPPA 6.0 - 16

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Recovery (Late) Phase



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RPPA 6.0 - 17
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Recovery (Late) Phase

Transition and Summary

- **Module 6.0** described and identified the recovery strategies, coordination and communication conducted by State and local agencies with Federal resources during the Late Phase of a radiological incident at a NRC-licensed commercial NPP.
 - Nuc/Rad Incident Annex (NRIA)
 - Price Anderson Act (PAA)
 - American Nuclear Insurers (ANI)
- **Module 7.0** Course Summary & Post-Test & End-of-Course Evaluation



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RPPA 6.0 - 18

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Recovery (Late) Phase